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THREE ORNAMENTAL MEMBERS OF THE ARALIA FAMILY: THE MAACKIAS: THE SEA BUCKTHORN

Three widely diverse members of the Aralia Family (*Araliaceae*) currently attracting attention in the Arboretum are the Castor Aralia, *Kalopanax pictus*, striking bold leaved tree from the Orient, *Aralia spinosa*, tall shrub or small tree known variously as Hercules Club, Devil's Walking Stick and Angelica Tree, and the American Spikenard or Indian Root, *Aralia racemosa*, indigenous herbaceous perennial with spectacular fruit.

Of the three, *Aralia spinosa* is the most widely known and frequently encountered. A tropical appearing tree-like shrub which in favored sites may reach a height of 30 feet (15 more usual here), it is recognized by its gaunt, prickly stems (black spines about a quarter of an inch long), its symmetrical umbrella shaped head and its masses of luxuriant pinnate (compound) foliage. One marvels most at the size of the leaves which not infrequently attain a length of 20 to 36 inches and at the distinctive, semi-drooping position in which they are displayed. Dark green in color, rough to the touch and consisting of many evenly serrate oval leaflets to $2\frac{1}{2}$ inches wide and 4 long, they are handsome by any standards. So too are the late appearing tiny white flowers (Aug.-early Sept.), which notwithstanding their size are borne terminally in large, extremely showy compound umbels. Ivory colored pedicels add to their beauty. They change to red before the small black berries ripen in September, however, thereby extending the interest. Birds make good use of the fruit for a month or more.

Those who may object to the Devil's Walking Stick's stark winter appearance should consider the interesting shadow effects possible when it is displayed against the proper background. Multiple trunks often enhance its possibilities.

In its native habitat which extends from southern Pennsylvania, southern Indiana, eastern Iowa and south to Florida and east Texas, it frequents rich, moist locations, sites in which it attains the most luxuriant growth. Not fussy about soils, however, it will thrive in almost any location and tolerate part shade.

The other woody form and tallest of the three is the Castor Aralia, *Kalopanax pictus*, sole member of the genus which has been referred

to as one of the noblest trees of cool temperate regions. Occurring abundantly in the moist forests of northern Japan, Korea and central and West China, where it reaches heights of 80 ft. and trunk diameters of 4 or 5, it cannot be expected to attain such proportions here. In fact, it is a moderately slow grower, requiring about 30 years to reach flowering size. The whitish blossoms are as spectacular as the fruit, very small individually but arranged in ball-like clusters united into umbels or large terminal panicles. They appear in August, a time of scanty tree bloom. Shiny black fruits ripen later in the fall adding further ornamental interest and providing good bird food.

At other seasons foliage is the Castor *Aralia*'s chief ornamental attraction. Not only its enormity, for some of the leaves do attain diameters of from 9 to 14 inches, but also its distinctive shape mark it as something special. Suggesting magnified Sweet Gum leaves, the blades are palmately lobed with 5 or 7 ovate or triangularly ovate lobes, long pointed, sharply toothed and borne on long sturdy petioles. There is a color similarity to Sweet Gum, too, although the lighter green lower surfaces are marked with a reddish brown pubescence. The density of the foliage mass insures good shade.

Whereas mature Castor *Aralia* specimens may develop a rugged branch structure and silhouette not unlike that of an old oak, younger trees are round topped and often multiple trunked with stiff, erect-spreading branches. Both they and the roughly ridged trunks are formidably armed with scattered short very sharp spines and knob-like bud spurs of variable length. The conically pointed winter buds are reddish brown and rather conspicuous.

The third species of special interest at the present time is *Aralia racemosa*, better known as American Spikenard. And while it has many of the same characteristics as other members of the genus, its herbaceous character, lower stature and unarmed branches set it apart. Look for it in the wild along woodland margins, where in rich, moist, partly shaded situations the handsomest plants will be found. A tall (3 to 5 ft.) branching herb, it has smooth purplish stems and large ternately compound leaves consisting as a rule of 15 to 21 broadly ovate leaflets (to 7" long, 5½" wide) with heart shaped bases, double toothed margins and acuminate tips. They are thin, rather rough to the touch and of a good deep green color which in autumn takes on spectacular reddish purple and yellow tones. Like other *Araliaceae* the flowers depend upon mass effect for interest, being very small individually. They are greenish white and arranged in small round clusters which in the aggregate form large terminal spikes. It is when the fruit starts to ripen in early September, however, that the plant reaches its showiest stage, an extremely handsome multicolored effect resulting from the combination of pale green, wine colored and eventually brown purple globular berries. About the size of Elderberries and arranged in close clusters, they make a spectacular showing. The roots are esteemed for their aromatic fragrance.

The Maackias

Although having little landscape attraction, the two *Maackias* included in the Arboretum collection are both interesting botanically as arborescent representatives of a genus within the Pea Family comprising

six species of Asiatic origin. At one time grouped with the *Cladrastis*, botanists have since separated *Maackia* into a separate genus based largely on the differences in arrangement of the leaflets and in the size and appearance of the winter buds. *Cladrastis* leaflets are borne alternately and its minute winter buds are enclosed by the base of the petiole, while those of *Maackia* are mostly opposite and its scaly winter buds free of enclosure in the axils of the leaves. The generic name, incidentally, honors Richard Maack, a Russian Naturalist of an earlier generation (1825-86).

The Korean species, *Maackia Fauriei*, introduced in 1917, is the most attractive of the two growing here, a bushy tree to 20 or 25 ft. with smooth olive green twigs, rather leathery rich green foliage and slightly fragrant, white pea-like flowers borne in dense upright racemes frequently branched at the base. With little else in bloom during its July and August flowering period, the tree is more apt to be noticed at that time than would be the case normally. As a point of distinction between this and the related species "*amurensis*", it may be mentioned that the latter has 7 to 11 leaflets in contrast to the 9 to 17 typical of "*Fauriei*". The leaflets of "*Fauriei*" are shorter, too, (to 2" long) and more slender.

The gaunt, sparsely branched plant which represents the Amur *Maackia*, *Maackia amurensis*, in the Arboretum would certainly never occasion a second look. In the rigorous climate of its native Manchuria, however, where it is said to become a tree 40 or 50 ft. tall, its olive green bark, leafy foliage mass and summer floral show would undoubtedly warrant more appreciation. Its 7 to 11 leaflets are broader than those of "*Fauriei*" and its individual blossoms a trifle larger (to 1/3" long). Thin, dry pods of no ornamental interest are produced spasmodically in the fall and the foliage drops without color change. Culturally both species prefer a light soil in a sunny situation.

Hippophae rhamnoides, Sea Buckthorn

Even though introduced from Asia during colonial times it is only rarely that the Sea-Buckthorn is encountered in our gardens. Not a *Rhamnus* as the name suggests, one must look to its silvery coated foliage for the clue which establishes its relationship with the *Elaeagnaceae*, a family of which the Russian Olive is undoubtedly the most familiar example.

A fall fruiting subject 'par excellence', the Sea Buckthorn is notable not only for the distinctive color of its translucent orange berries, but also for the abundance in which they are produced. In fact, so thickly are they clustered along the stems that the branchlets are practically hidden. Such a fruit display is impossible, however, unless one understands that the sexes are borne separately, the pollen bearing (staminate) flowers on one plant; the fruiting (pistillate) on another. To insure a good setting of berries one staminate plant should be included in each group of six pistillate. Little mention need be made of the small inconspicuous April borne flowers.

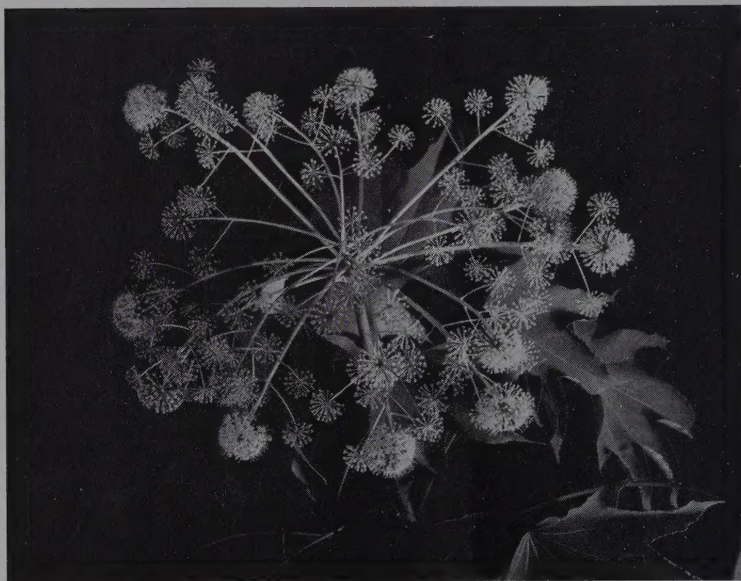
Location largely dictates the bushes' size and stature, older plants sometimes reaching 30 ft. More often the species occurs as a tall shrub, erect and spiny branched, but with an evenly rounded top. The alternately arranged, narrow, willow-like leaves (1 to 2 1/2 inches long) are grayish green with the lower surfaces covered with prominent silvery scales.

Brownish gray, spiny tipped branches support them. The prominent brown winter buds show up in the leaf axils as early as late August.

Ignored by the birds until nothing else is available, the fruit lasts throughout most of the winter, adding a cheery note to the landscape.

A shrub often recommended for seashore planting because of its tolerance of wind and salt spray and its ability to stabilize dunes, one would naturally expect the Sea Buckthorn to prefer a well drained sandy site. And, although it is perhaps happiest in such a location we have found it equally adaptable to heavier soils.

E. L. Kammerer



The spectacular ball-like flower clusters of the Castor Aralia, *Kalopanax pictus* (Nakai)

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